

# UNIVERSITY OF MINNESOTA

Twin Cities Campus

Telemedicine Center

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December 16, 1996

Office of the Secretary  
Federal Communications Commission  
Room 222  
1919 M Northwest  
Washington D.C.

CC Docket No. 96-45

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Members of the FCC:

Enclosed is a copy of a survey reporting the costs and uses of service of telemedicine at the University of Minnesota. We are specifically concerned with the monthly cost of service, which is both arbitrary and expensive.

Table 4. Transmission Charges by Site

Site	Miles to Network Provider (MEANS)	Monthly Access Charge	Hourly Charge
Red Wing	60	\$1159	\$28/hr
Hibbing	195	\$1158	\$35/hr
Moose Lake	111	\$958	\$35
Staples	155	\$821	\$35/hr
University of Minnesota	10	\$365	\$15/hr
Wadena	173	\$250	\$35/hr

We have used telemedicine to provide medical consultation to over 200 patients, primarily in the areas of dermatology, orthopedics, psychiatry, neurology, and emergency care. In addition to the medical consultation, we have launched a Rural Health School, where nursing, pharmacy, and medical students receive training using the interactive system.

We hope that you find this information useful to your work.

Sincerely,

*Andrea De Vries*

Andrea De Vries  
Program Manager

No. of Copies rec'd  
List ABCDE

4

(1-1)

Questions to Address:

1. Name of project:

University of Minnesota Telemedicine Demonstration

2. Please list each of the project's sites:

Name of Site:	State in which it is located:
Tri-County Hospital-Wadena	MN
Greater Staples Hospital-Staples	MN
Mercy Hospital & HC Center-Moose Lake	MN
Interstate Medical Center-Red Wing	MN
University-Mesabi Hospital-Hibbing	MN

Please answer the following questions for each of your sites.  
Use additional sheets if necessary.

1. Wadena

3. What is the nearest city of population equal to or greater than 50,000 in your state, and approximately how far are you from its boundary?

City: Fargo, ND Distance from city boundary: 80 miles

4. Name of the project's telecommunications service provider:

MEANS Network

5. Level of telecommunications service the project is currently using: (For example, voice grade, 144 Kbps (ISDN), 384 Kbps, T-1 or equivalent)

T-1

## 6. Charges for telecommunications service:

Is there a monthly charge? No ☐ Yes ☒

If yes, how much is the charge? \$250/mo

Is there a usage-based charge? No ☐ Yes ☒

If yes, how much is the charge? \$35/hr

Is there a distance component (such as a per-mile fee) of the charge? No ☐ Yes ☒

If yes, how much is the charge? \$35/hr

Was there an installation fee? No ☐ Yes ☐

If yes, how much was the charge? \$1500

Is the charge the regular tariffed rate, or is there a discount from the telecommunications provider? Tariffed ☒ Discount ☐

If there is a discount, how much is it?

7. How does the project use telecommunications in the delivery of health care? (For example -- to send x-rays, distribute public health information, or perform video consultations. Please identify any occasional or episodic uses, such as might result from an outbreak of disease.)

Dermatology Clinics

Orthopedics

Psychiatry

Emergency-Trauma Care

Public Health Updates

Radiology

EKG

Training of Pharmacy, Medical, and Nursing Students

(1-3)

8. Could the project provide the services it is currently providing with less bandwidth? What effect would a lesser level of bandwidth have? (The implications of using greater or lesser levels of telecommunications services are related to image transmission time. What would the be the impact if the health care activities for which you now use telecommunications took twice as long, or if they could be completed in half the time?)

For interactive consults, we can reduce our bandwidth to

1T and have satisfactory results.

For EKG readings, we use full T-1 lines.

If we did not have our current level of bandwidth, use of the system would drop significantly.

9. What would the implications of having a greater level of bandwidth be?

If we had greater bandwidth, we would have greater participation in our activities with the rural providers and urban specialists.

(1-4)

10. Do you have e-mail? No ☐ Yes ☒

11. Do you have Internet access? No ☐ Yes ☒ yes  
no  
If yes, do you incur long-distance charges by using it?  
No ☒ Yes ☐

Please estimate your number of hours of Internet use per month:

20 hours/month

*Wadena - 20*

12. If you have access to the Internet, please list any purposes other than e-mail (such as accessing databases such as Lexis/Nexis) for which you use it:

Use internet for scheduling telemedicine  
conferences and learning about educational  
activities.

(2-1)

**Questions to Address:**

1. Name of project:

University of Minnesota Telemedicine Demonstration

2. Please list each of the project's sites:

Name of Site:

State in which it is located:

Greater Staples Hospital-StaplesMN

Please answer the following questions for each of your sites.  
Use additional sheets if necessary.

3. What is the nearest city of population equal to or greater than 50,000 in your state, and approximately how far are you from its boundary?

City: St. Cloud, MN Distance from city boundary: 90 miles

4. Name of the project's telecommunications service provider:

MEANS Network

5. Level of telecommunications service the project is currently using: (For example, voice grade, 144 Kbps (ISDN), 384 Kbps, T-1 or equivalent)

T-1

(2-2)

## 6. Charges for telecommunications service:

Is there a monthly charge? No ☐ Yes ☒  
If yes, how much is the charge? \$600/mo

Is there a usage-based charge? No ☐ Yes ☒  
If yes, how much is the charge? \$35/hr

Is there a distance component (such as a per-mile fee) of the charge? No ☐ Yes ☒  
If yes, how much is the charge? \$35/hr

Was there an installation fee? No ☐ Yes ☒  
If yes, how much was the charge? \$1500

Is the charge the regular tariffed rate, or is there a discount from the telecommunications provider? Tariffed ☒ Discount ☐  
If there is a discount, how much is it?

7. How does the project use telecommunications in the delivery of health care? (For example -- to send x-rays, distribute public health information, or perform video consultations. Please identify any occasional or episodic uses, such as might result from an outbreak of disease.)

Dermatology Clinics

Orthopedics

Rheumatology

Training of medical students, pharmacy students, and nursing students

(2-3)

8. Could the project provide the services it is currently providing with less bandwidth? What effect would a lesser level of bandwidth have? (The implications of using greater or lesser levels of telecommunications services are related to image transmission time. What would the be the impact if the health care activities for which you now use telecommunications took twice as long, or if they could be completed in half the time?)

For interactive consults, we can reduce our bandwidth to  $\frac{1}{2}$ T, and have satisfactory results.

For EKG readings, we can use full T-1 lines.

If we did not have our current level of bandwidth, participation in our program would drop significantly.

9. What would the implications of having a greater level of bandwidth be?

If we had greater bandwidth, we would increase participation with rural providers and specialists.



10. Do you have e-mail? No ☐ Yes ☒

11. Do you have Internet access? No ☐ Yes ☒

If yes, do you incur long-distance charges by using it?

No ☐ Yes ☒

Please estimate your number of hours of Internet use per month:

20 hours/month

Wadena - 20

12. If you have access to the Internet, please list any purposes other than e-mail (such as accessing databases such as Lexis/Nexis) for which you use it:

Scheduling consults, identifying educational  
opportunities available over the interactive  
telemedicine system.

(3-1)

**Questions to Address:****1. Name of project:**University of Minnesota Telemedicine Demonstration**2. Please list each of the project's sites:****Name of Site:****State in which it is located:**Mercy Hospital-Moose LakeMN

Please answer the following questions for each of your sites.  
Use additional sheets if necessary.

3. What is the nearest city of population equal to or greater than 50,000 in your state, and approximately how far are you from its boundary?

City: Duluth, MN

Distance from city boundary: 60 miles

**4. Name of the project's telecommunications service provider:**MEANS Network

5. Level of telecommunications service the project is currently using: (For example, voice grade, 144 Kbps (ISDN), 384 Kbps, T-1 or equivalent)

T-1

(3-2)

6. Charges for telecommunications service:

Is there a monthly charge? No ☐ Yes ☒

If yes, how much is the charge? \$900/mo

Is there a usage-based charge? No ☐ Yes ☒

If yes, how much is the charge? \$35/hr

Is there a distance component (such as a per-mile fee) of the charge? No ☐ Yes ☒

If yes, how much is the charge? \$35/hr

Was there an installation fee? No ☐ Yes ☒

If yes, how much was the charge? \$1500

Is the charge the regular tariffed rate, or is there a discount from the telecommunications provider? Tariffed ☒ Discount ☐

If there is a discount, how much is it?

7. How does the project use telecommunications in the delivery of health care? (For example -- to send x-rays, distribute public health information, or perform video consultations. Please identify any occasional or episodic uses, such as might result from an outbreak of disease.)

Rural Health School-

Training of nursing, medical, and pharmacy students

(3-3)

8. Could the project provide the services it is currently providing with less bandwidth? What effect would a lesser level of bandwidth have? (The implications of using greater or lesser levels of telecommunications services are related to image transmission time. What would the be the impact if the health care activities for which you now use telecommunications took twice as long, or if they could be completed in half the time?)

Participation in Rural Health School  
would drop.

9. What would the implications of having a greater level of bandwidth be?

Participation in Rural Health School  
would increase.

(3-4)

10. Do you have e-mail? No ☐ Yes ☒

11. Do you have Internet access? No ☐ Yes ☒

If yes, do you incur long-distance charges by using it?

No ☐ Yes ☒

Please estimate your number of hours of Internet use per month:

100 hours/month

Wadena - 20

12. If you have access to the Internet, please list any purposes other than e-mail (such as accessing databases such as Lexis/Nexis) for which you use it:

Scheduling for telemedicine,

educational opportunities.

(4-1)

**Questions to Address:****1. Name of project:**University of Minnesota Telemedicine Demonstration**2. Please list each of the project's sites:**

<b>Name of Site:</b>	<b>State in which it is located:</b>
<u>Interstate Medical Center-Red Wing</u>	<u>MN</u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>

Please answer the following questions for each of your sites.  
Use additional sheets if necessary.

**3. What is the nearest city of population equal to or greater than 50,000 in your state, and approximately how far are you from its boundary?**

City: Minneapolis, MN Distance from city boundary: 60 miles

**4. Name of the project's telecommunications service provider:**  
MEANS Network**5. Level of telecommunications service the project is currently using: (For example, voice grade, 144 Kbps (ISDN), 384 Kbps, T-1 or equivalent)**T-1

(4-2)

## 6. Charges for telecommunications service:

Is there a monthly charge? No ☐ Yes ☒

If yes, how much is the charge? \$1,159/mo

Is there a usage-based charge? No ☐ Yes ☒

If yes, how much is the charge? \$28/hr

Is there a distance component (such as a per-mile fee) of the charge? No ☐ Yes ☒

If yes, how much is the charge? \$28/hr (same as above)

Was there an installation fee? No ☐ Yes ☒

If yes, how much was the charge? \$1500

Is the charge the regular tariffed rate, or is there a discount from the telecommunications provider? Tariffed ☒ Discount ☐

If there is a discount, how much is it?

7. How does the project use telecommunications in the delivery of health care? (For example -- to send x-rays, distribute public health information, or perform video consultations. Please identify any occasional or episodic uses, such as might result from an outbreak of disease.)

(same as other sites)

(4-3)

8. Could the project provide the services it is currently providing with less bandwidth? What effect would a lesser level of bandwidth have? (The implications of using greater or lesser levels of telecommunications services are related to image transmission time. What would the be the impact if the health care activities for which you now use telecommunications took twice as long, or if they could be completed in half the time?)

(same as other sites)

9. What would the implications of having a greater level of bandwidth be?

(same as other sites)



(4-4)

10. Do you have e-mail? No ☐ Yes ☒

11. Do you have Internet access? No ☐ Yes ☒

If yes, do you incur long-distance charges by using it?

No ☐ Yes ☒

Please estimate your number of hours of Internet use per month:

40 hours/month

Wadena - 20

12. If you have access to the Internet, please list any purposes other than e-mail (such as accessing databases such as Lexis/Nexis) for which you use it:

Scheduling telemedicine conferences.

(5-1)

**Questions to Address:****1. Name of project:**University of Minnesota Telemedicine Demonstration**2. Please list each of the project's sites:**

Name of Site:	State in which it is located:
University-Mesabi Medical Center-Hibbing	MN
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Please answer the following questions for each of your sites.  
Use additional sheets if necessary.

**3. What is the nearest city of population equal to or greater than 50,000 in your state, and approximately how far are you from its boundary?**

City: Duluth, MN Distance from city boundary: 60 miles

**4. Name of the project's telecommunications service provider:**MEANS Network**5. Level of telecommunications service the project is currently using: (For example, voice grade, 144 Kbps (ISDN), 384 Kbps, T-1 or equivalent)**T-1

(5-2)

6. Charges for telecommunications service:

Is there a monthly charge? No ☐ Yes ☒  
 If yes, how much is the charge? \$1,158/mo

Is there a usage-based charge? No ☐ Yes ☒  
 If yes, how much is the charge? \$35/hr

Is there a distance component (such as a per-mile fee) of the charge? No ☐ Yes ☒  
 If yes, how much is the charge? \$35/hr

Was there an installation fee? No ☐ Yes ☒  
 If yes, how much was the charge? \$1500

Is the charge the regular tariffed rate, or is there a discount from the telecommunications provider? Tariffed ☒ Discount ☐  
 If there is a discount, how much is it?

7. How does the project use telecommunications in the delivery of health care? (For example -- to send x-rays, distribute public health information, or perform video consultations. Please identify any occasional or episodic uses, such as might result from an outbreak of disease.)

(same as other sites)

(5-3)

8. Could the project provide the services it is currently providing with less bandwidth? What effect would a lesser level of bandwidth have? (The implications of using greater or lesser levels of telecommunications services are related to image transmission time. What would the be the impact if the health care activities for which you now use telecommunications took twice as long, or if they could be completed in half the time?)

(same as other sites)

9. What would the implications of having a greater level of bandwidth be?

(same as other sites)

(5-4)

10. Do you have e-mail? No ☐ Yes ☒

11. Do you have Internet access? No ☐ Yes ☒

If yes, do you incur long-distance charges by using it?

No ☒ Yes ☐

Please estimate your number of hours of Internet use per month:

100 hours/month

Wadena - 20

12. If you have access to the Internet, please list any purposes other than e-mail (such as accessing databases such as Lexis/Nexis) for which you use it:

Scheduling telemedicine activities.